Creating Healthy Indoor Environments in California Schools

1. Ensure good ventilation

Proper maintenance of ventilation and filtration equipment plays a big role in the quality of indoor air. Ensure that ventilation systems are operating properly, regularly inspected, and maintained according to system manufacturer guidelines or ANSI/ASHRAE/ACCA Standard 180-2012. Do not use humidifiers in classrooms.

2. Reduce indoor dust

- Use wet instead of dry cleaning methods
- Use HEPA filter vacuums
- Clean classrooms frequently to keep dust levels low
- Use walk-off mats

For more information on best cleaning practices, visit: http://www.epa.gov/iaq-schools/technical-solutions-common-indoor-air-quality-issues-schools#tab-4.

3. Purchase less toxic cleaning products

"Safer Choice" and "Green Seal" labeled products help consumers, businesses, and purchasers find products that perform well and are safer for use in schools. Fragrance free products are safer for children with asthma. For more information, see U.S. EPA's Safer Choice webpage at: http://www.epa.gov/saferchoice.

4. Replace older Fluorescent Light Ballasts (FLBs)

Schools built before 1980 should remove all PCB-containing Fluorescent Light Ballasts to minimize exposure to PCBs. Fixtures should also be replaced when FLBs are found to be leaking. For more information, refer to http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/ballasts.htm. This work may qualify for state funding under Proposition 39.

5. Adopt Integrated Pest Management (IPM) Practices

Reducing food and water sources for pests reduces your reliance on pesticides and saves your school money. Seal cracks, install window and door screens, and don't bring in pesticides from home. For more information and resources on IPM refer to California's Department of Pesticide Regulation webpage: http://apps.cdpr.ca.gov/schoolipm/.

Benefits of Healthy Indoor Environment School Environment

Reduce absenteeism

Improve academic performance

Avoid short and long-term health effects

The recommended actions were developed jointly by the California Environmental Protection Agency, the Department of Toxic Substances Control, and the U.S. Environmental Protection Agency Region 9

Creating Healthy Indoor Environments in California **Schools**

6.2 million Californian children attend public schools

Healthy indoor school environments reduce school days missed each year

Fact: Children are more *vulnerable* to environmental contaminants than adults

Common Potential Contaminants

- **Volatile Organic Compound (VOCs)**
  VOCs enter air from some adhesives, carpets, and composite wood; they are also released by copy machines, pesticides, and cleaning agents.
- **Polychlorinated Biphenyls (PCBs)**
  PCBs can be found in caulk and fluorescent light ballasts in buildings built before 1980.
- **Mold and Pathogens**
  Moisture in central air systems or humidifiers can become breeding grounds for mold and pathogens (such as Legionella) and distribute them throughout a building.
- **Particulates**
  Particulates can accumulate in classrooms from outdoor sources such as dust, smoke and exhaust as well as certain indoor heaters.
- **Lead**
  Lead dust can be created from disturbance or contact with flaking or decomposing lead-based paint.
- **Asbestos**
  Asbestos can be released from flaking or disturbed ceiling and floor tiles, and insulation manufactured with asbestos.
- **Pesticides**
  Pesticides may be used in schools both indoors and outdoors to control pests.

Useful Links:

1. Practical Actions for Reducing PCB Exposures in Schools and Other Buildings
   http://www.epa.gov/wastes/hazard/tsd/pcbs/pubs/caulk/pdf/pcb_fs_v7.pdf
2. Rebate Information for Fluorescent Light Ballasts
   http://www.energy.ca.gov/efficiency/proposition39/index.html
3. School Indoor Air Quality Assessment Mobile App
   http://www.epa.gov/iaq-schools/school-iaq-assessment-mobile-app